THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DOUGLAS J. DAWLEY and JAMES B. VROTACOE

Appeal No. 1998-2899
Application No. 08/632,687

ON BRIEF

Before ABRAMS, STAAB, and GONZALES, Administrative Patent Judges

GONZALES, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 32 through 39. Claims 1 through 3, 5 through 7, 24, 25, and 31 have been canceled. Claims 4, 8 through 23 and 26 through 30, the only other claims remaining in the application, stand withdrawn from consideration under

37 CFR

§ 1.142(b).

We REVERSE.

The subject matter on appeal is directed to an apparatus for reducing procession of a gapless tubular printing sleeve mounted on a cylinder.[1] With reference to the appellants' Figure 3, the invention includes a groove 50 extending straight across the circumferential surface of the mounting cylinder 40 and connecting the interface of the mounting cylinder 40 and the tubular printing sleeve (not shown) to an air canal 60. During operation of the printing press, air canal 60 is vented to atmosphere so that the fluid wave can escape to a region of low pressure via the groove 50. See specification, p. 8. Claim 32 is illustrative of the subject matter on appeal and is reproduced in an appendix attached to the brief (Paper No. 23).

[1] We are inform by the appellants' specification (pp. 2, 3) that printing sleeve procession is a phenomena caused by air trapped in the interface between a tubular printing sleeve, e.g., printing blanket 16 (Fig. 1), and the outer surface of its corresponding mounting cylinder, e.g., blanket cylinder 14 (Fig. 1). The trapped air creates a continually advancing wave (see bulge 26 in Fig. 1) in front of a nip between the mounting cylinder and an adjacent cylinder against which it is pressed causing the printing sleeve to bulge.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Fellows	4,030,415	Jun. 21, 1977
Smith	4,056,057	Nov. 01, 1977
Fischer	4,589,339	May 20, 1986
Tittgemeyer	4,913,048	Apr. 03, 1990
Vrotacoe	5,245,923	Sep. 21, 1993
Arkell (British)	1,401,695	Jul. 30, 1975

The appealed claims stand finally rejected under 35 U.S.C. § 103(a) on the following grounds:

(1) Claims 32 through 35, 37 and 38, unpatentable over Fellows in view of Arkell;

(2) Claim 36, unpatentable over Fellows in view of Arkell and Smith; and

(3) Claim 39, unpatentable over Fellows in view of Arkell in combination with Tittgemeyer, Vrotacoe or Fischer.

The full text of the examiner's rejections and response to the arguments presented by the appellants appears in the

answer (Paper No. 24), while the complete statement of the appellants' arguments can be found in the brief (Paper No. 23).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejections of claims 32 through 39 under 35 U.S.C. § 103.

Before addressing the examiner's rejections based upon prior art, it is an essential prerequisite that the claimed subject matter be fully understood. Analysis of whether a

claim is patentable over the prior art under 35 U.S.C. §§ 102 and 103 begins with a determination of the scope of the claim. The properly interpreted claim must then be compared with the prior art. Accordingly, we will initially direct our attention to the appellants' claim 32, which is the only independent claim on appeal, to derive an understanding of the scope and content thereof.

Claim 32 calls for an apparatus for reducing procession of a gapless tubular printing sleeve comprising: a gapless tubular printing sleeve; a cylinder having an outer circumference which

is greater than the inner circumference of the printing sleeve; a passage [e.g., air canal 60, Fig. 3] provided on the circumferential surface of the cylinder through which pressurized air is applied to rapidly expand the printing sleeve for installation of the sleeve onto and removal of the sleeve from the cylinder; and a means extending substantially across a length of the cylinder for connecting an interface of

the cylinder and the printing sleeve to a low pressure region.[2]

In construing the language "a means extending substantially across a length of the cylinder for connecting an interface of the cylinder and the printing sleeve to a low pressure region," we note that the "means" may comprise, for example, a groove 50 as shown in Figure 3. The groove 50 is described in the specification (p. 8) as extending "across the circumferential surface of the cylinder" and as connecting the interface of the cylinder 40 and a printing sleeve mounted thereon to an air canal 60.

We also note the appellants' argument on page 6 of the brief that the circumferential grooves 26 in the embodiment illustrated

in Figure 4 of Fellows do not meet the claimed means limitation because the grooves 26 in Fellows would only allow air trapped

between the blanket and cylinder <u>at the circumferential</u>

[2] According to the appellants' specification (p. 8), the "low pressure region" may be the atmosphere.

grooves to escape. In fact, Fellows teaches that the grooves 26 are arranged like grooves 10b in Figure 1 (col. 4, ll. 31, 32) and that circumferential grooves 10b in Figure 1 are 6 mm wide (col. 2, l. 67) and "typically located 25 mms from the ends of the tube 10 and at about 30 cms spacing along the length of the tube 10" (col. 2, ll. 59-66).[3]

In light of the specification and the arguments made in the brief, we understand the language "a means extending substantially across a length of the cylinder for connecting an interface of the cylinder and the printing sleeve to a low pressure region" as requiring the "means" to be unbroken or continuous across the length of the cylindrical interface between the cylinder and the printing sleeve such that all trapped air in the interface will necessarily encounter the "means" as the cylinder is rotated 360**N**.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of

[3] Six (6) mm is approximately ¼ inches and 30 cm is approximately 12 inches.

obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to arrive at the claimed invention. See In re Lintner, 9 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded

assumption or

hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

Fellows discloses a first embodiment (see Fig. 1) in which a stretchable seamless printing sleeve 17 is fitted onto a tube 10 having a larger external diameter than the internal diameter of the sleeve. The tube 17 has a passageway 16 and a series of spaced apart circumferential grooves 10b on its outer surface. The passageway 16 and each of grooves 10b is connected to the inside of the tube 10 which, in turn, may be connected to a source of compressed air. Fellows teaches that the printing roll is assembled by sliding the sleeve axially over the seal 13 to the conical part 10a of the tube, at which point the space 13a between seal 13, the end of the sleeve 17 and the end of the tube 10 becomes pressurized. As the sleeve passes over the tube, the interior of the sleeve is internally pressurized by compressed air distributed from inside the tube

through the holes 10c and circumferentially through the grooves 10b to expand the sleeve. See col. 3, ll. 21-39. Once the sleeve is fully fitted on the

tube, the compressed air supply is removed and air inside the tube escapes through passageway 16. Id. at 40-50.

Fellows also discloses a second embodiment (see Fig. 4) in which the internal diameter of the sleeve 17 is larger than the external diameter of the tube 10 so that the sleeve can easily

slip over the tube. In this embodiment, the sleeve grips the tube by a vacuum applied from inside the tube 10. The vacuum is directed to the underside of the sleeve 17 by virtue of circumferential grooves 26 (arranged like grooves 10b in FIG. 1) each connected to the inside of the tube 10 by a single hole 27. See col. 4, ll. 25-42.

In reading claim 32 on Fellows, the examiner considers the printing sleeve 17, the oversized tube 10 and the passage 16 in Figure 1 of Fellows to correspond to the claimed printing sleeve, cylinder and passage, respectively. See

answer, pp. 3, 4. The examiner further describes the circumferential grooves 26 in Figure 4 of Fellows as a means extending substantially across a length of the cylinder for connecting an interface of the cylinder and the printing sleeve to a low pressure region. Id.

at 4. However, the examiner relies on Arkell as teaching grooves 22 (Fig. 2) extending substantially across a length of the cylinder for securing a printing member[4] in position on a cylinder by means of a vacuum. Id. The examiner then concludes that

> [i]t would have been obvious . . . to utilize groove configurations on the cylinder surface in Fellows (4,030,415) extending substantially across a length of the cylinder in a manner as claimed, especially in view of the teaching of the same as disclosed by Arkell (G.B. 1 401 695). The motivation would have involved merely the choice of conventional groove configurations so as obtain air evacuation and printing member securement in an optimum manner.

[4] The "printing member" in Arkell is a printing plate, e.g., a lithographic plate or an intermediate rubber plate or blanket used in offset printing to transfer print from a lithographic plate to paper. See p. 1, ll. 9-20. Arkell does not teach or suggest a gapless tubular printing sleeve.

Id. at 6.

The appellants argue that there is no motivation for combining the two embodiments of Fellows so that both a passage for pressurized air and the claimed means attached to a low pressure area are provided on the same cylinder. See brief, pp. 5, 6. We agree.

The embodiments shown in Figures 1 and 4 of Fellows are so disparate (one uses an undersized sleeve mounted on an oversized

cylinder by expanding the sleeve with compressed air, the other uses an undersized cylinder connected to a vacuum source for securing an oversized sleeve to the cylinder) that we know of no reason why one of ordinary skill in the art would have been motivated to combine their various features in the specific manner set forth in claim 32.

Further, even if it had been obvious to modify the embodiment shown in Figure 4 of Fellows by substituting axial grooves for the circumferential grooves 26, the modified structure would still lack the cylinder having an outer

circumference which is greater than the inner circumference of the printing sleeve as recited in claim 32.

In addition, while we recognize that Arkell does suggest a printing plate vacuum hold down system including a cylinder having either circumferential grooves 11 (Fig. 1) or axial grooves 22 (Fig. 2), we know of no reason why one of ordinary skill in the art would have been motivated to substitute the axially extending grooves disclosed in Arkell, which are connected to a vacuum within the mounting cylinder to maintain a printing plate in position during operation of the printing press, for the circumferential grooves 10b disclosed in Figure 1 of Fellows, which are connected to pressurized air inside the printing cylinder to expand a printing sleeve during mounting of the sleeve on the cylinder. Along this same line, it is not absolutely clear to us that the axially extending grooves 22 in Arkell, which are interconnected by a single circumferential groove 24 to the interior of the cylinder, would successfully perform the function of the circumferential grooves 10b in the embodiment shown in Figure 1 of Fellows.

In our view, the only suggestion for combining the disparate teachings of Fellow's Figure 1 and Figure 4 embodiments in the manner proposed by the examiner or for modifying either the Figure 1 or the Figure 4 embodiment of Fellows in view of Arkell stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

We also disagree with the examiner's determination that the circumferential grooves 26 in Figure 4 comprise a means extending substantially across a length of the cylinder for connecting an interface of the cylinder and the printing sleeve to a low pressure region. As we have interpreted claim 32, supra, the language "a means extending substantially across a length of the cylinder for connecting an interface of the cylinder and the printing sleeve to a low pressure region"

cannot be read on the widely spaced grooves 10b or 26 in Fellows.

In light of the foregoing, we will not sustain the standing § 103 rejection of independent claim 32 and dependent claims 33 through 35, 37 and 38.

We have also reviewed the Smith reference applied along with Fellows and Arkell by the examiner against claim 36, and the Tittgemeyer, Vrotacoe and Fischer references applied along with Fellows and Arkell by the examiner against claim 39 on appeal. However, we find nothing in these additional references which makes up for the deficiencies of Fellows and Arkell discussed above regarding claim 32. Accordingly, we will also not sustain the standing 35 U.S.C. § 103 rejections of dependent claims 36 and 39.

CONCLUSION

To summarize, the decision of the examiner to reject claims 32 through 39 under 35 U.S.C. § 103 is reversed.

REVERSED

NEAL E. ABRAMS Administrative Patent Judge	)	
LAWRENCE J. STAAB Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOHN F. GONZALES Administrative Patent Judge	)	

jfg/vsh

Kenyon and Kenyon
One Broadway
New York, NY 10004